

Magnum Energy

Utah Governor's Energy
Development Summit

February 15, 2012



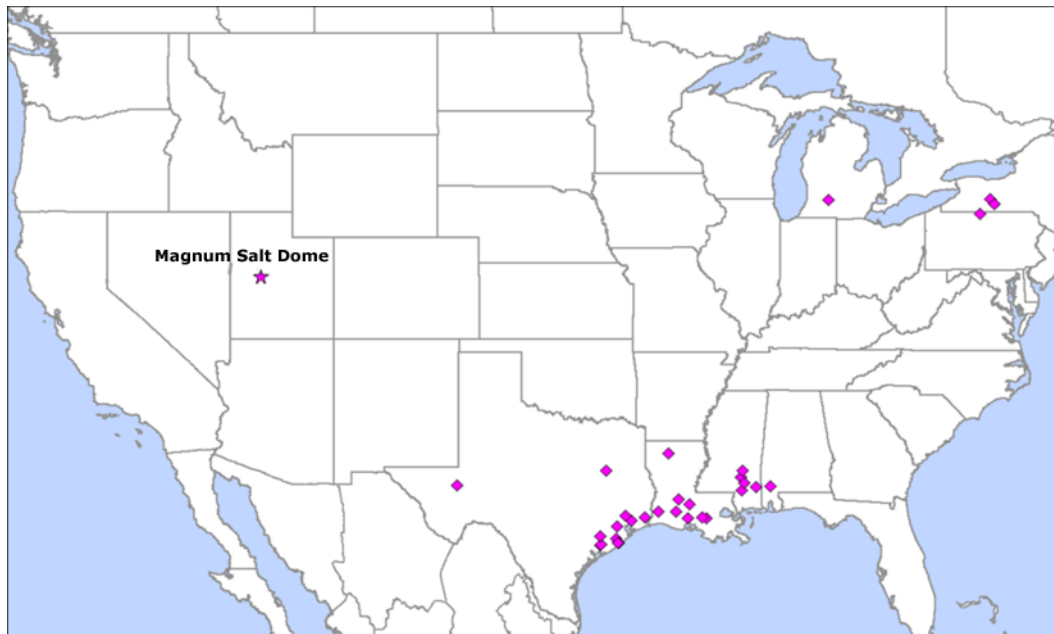
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A Unique Opportunity - Salt Cavern Storage

Magnum Salt Dome is One-of-a-Kind:

- Only salt dome in the Western U.S.
- At the crossroads of energy and transportation infrastructure
- Strategic asset for the State of Utah and the West



Salt is the Ideal Storage Medium:

- Recognized by the U.S. Government (Strategic Petroleum Reserve)
- Broadly utilized by the energy industry

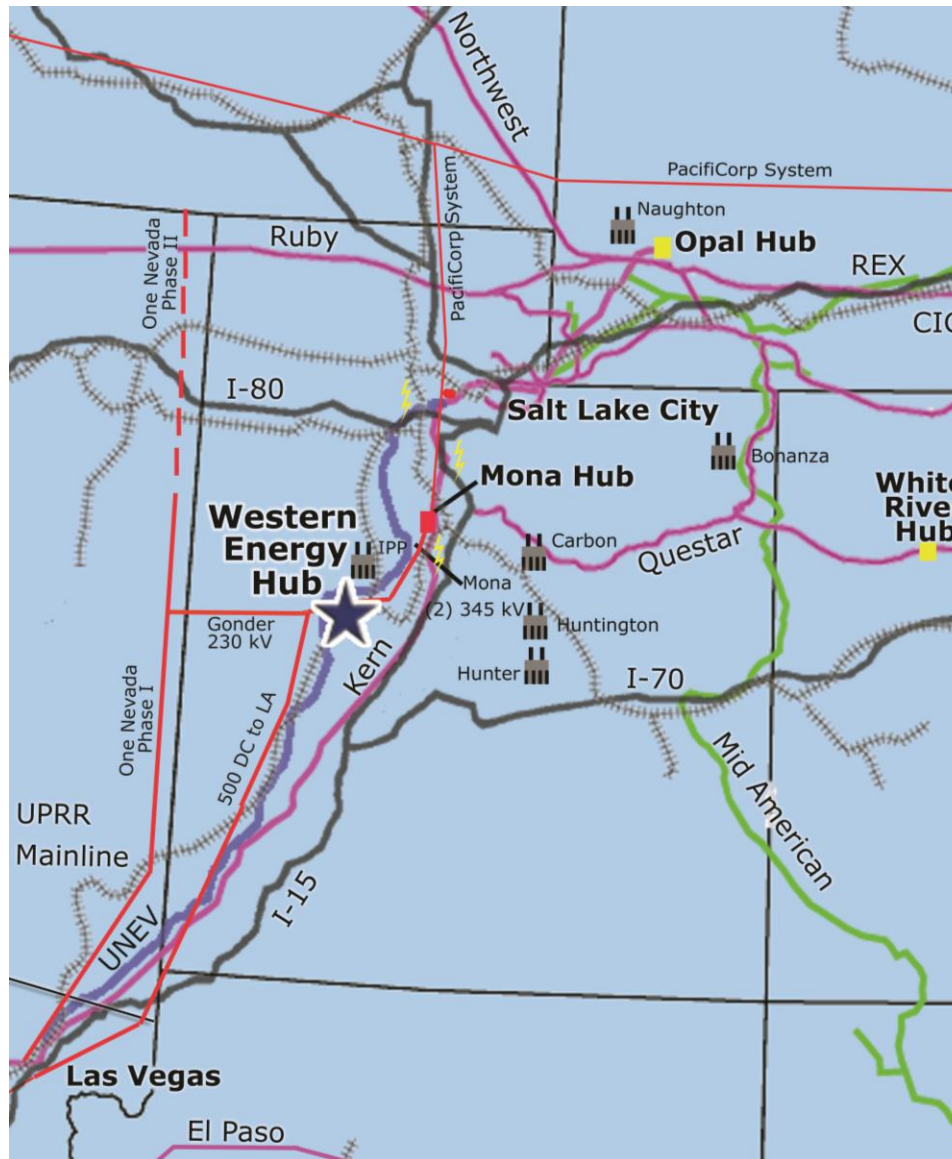
Salt Caverns Store a Wide Range of Energy Products:

- Natural Gas
- CAES (Compressed Air Energy Storage)
- Natural Gas Liquids
- Petroleum Products
- CO2

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Ideal Location: Significant Existing Infrastructure



- **Kern & Questar Natural Gas Pipelines**
- **Multiple Power Market Connectivity**
- **I-15 and I-80 Highways**
- **UP Railroad Mainline**
- **UNEV Pipeline**

Integrating Gas/Electric Markets

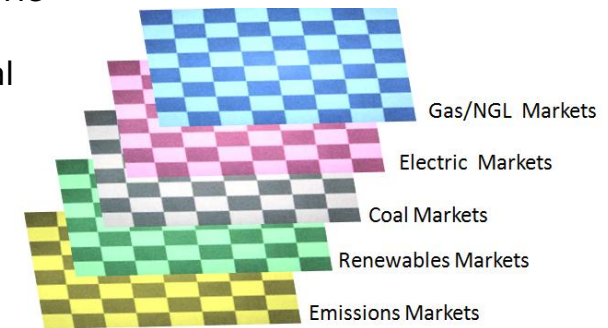
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The Gas and Electric Markets are Evolving

- Wet gas production is driven by the high value of NGLs in shales
- Shale production is driving natural gas prices to historic low levels by providing abundant long term supplies
- Environmental regulation shifts along with low natural gas prices are resulting in major changes in electric utility resource portfolios in favor of natural gas fired solutions
 - Reductions in carbon and other air toxins are required by new environmental regulations
 - Intermittent renewables are driven by RPS standards
 - MACT standards are shrinking coal fired generation fleets
- Natural gas fired generation along with Compressed Air Energy Storage (CAES) is rapidly becoming a clean and efficient solution to meet the demands of the evolving marketplace driven by new environmental regulations and low gas prices
 - Combined Cycle Peaking Turbines (CCGT) are providing new base load and intermediate resources
 - Simple Cycle Peaking Turbines (CT) are providing peaking services
 - CAES is filling in as a system shock absorber to store intermittent energy and to provide a rapid "ramp up – ramp down" resource to firm and shape intermittent renewables

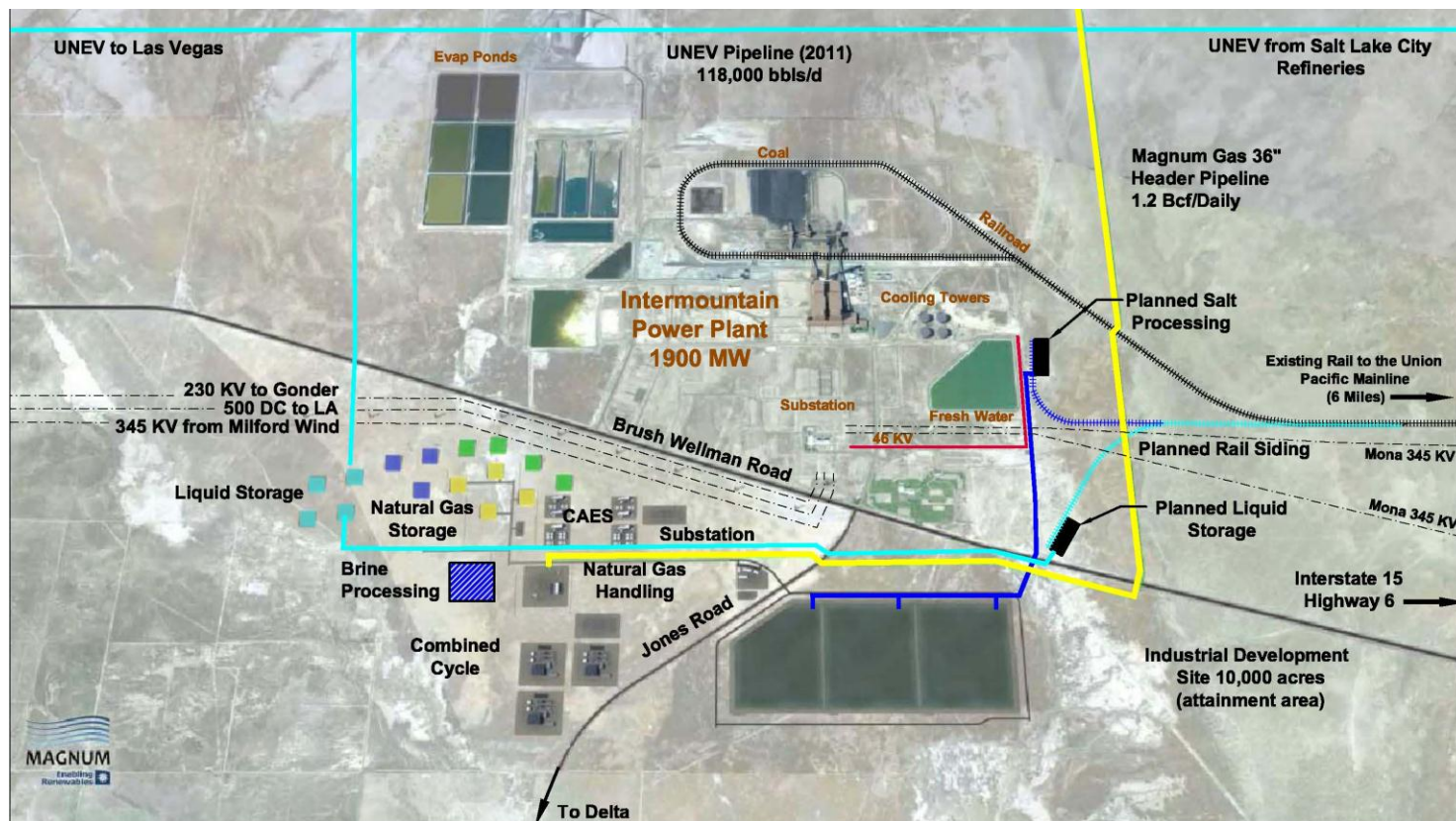


A Move on One Board Creates Opportunity on Other Boards

Magnum's Western Energy Hub

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Business Platforms:



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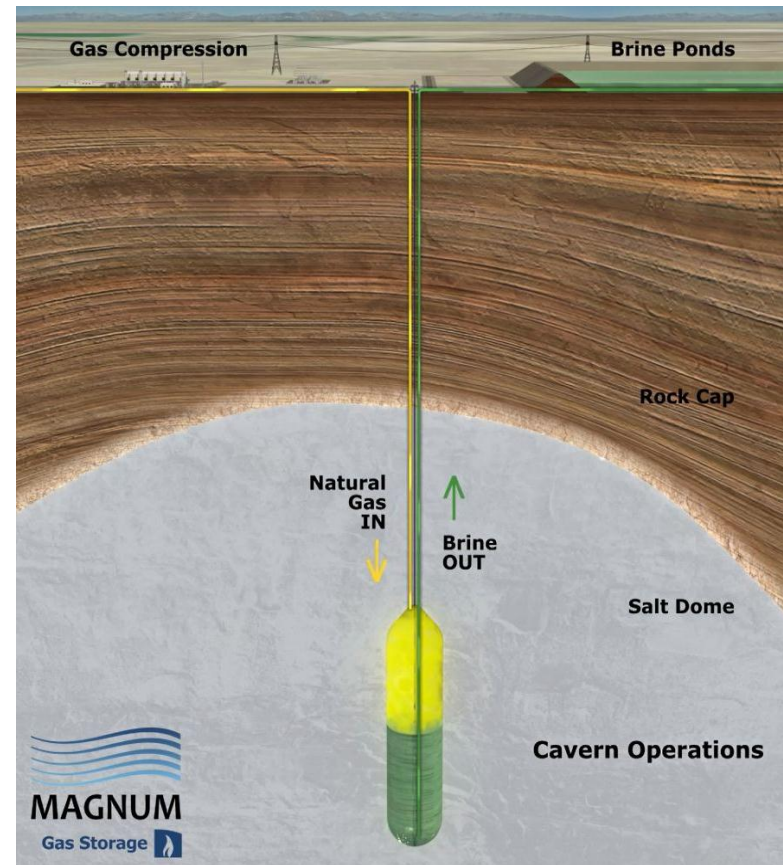
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Magnum Gas Storage

High-Deliverability Natural Gas

- Only high-deliverability storage facility in Rocky Mountain Region
- Interconnected with the interstate pipeline system by 61.5 mile long header
- Phase I is currently permitted and construction ready
 - 54 billion cubic feet of natural gas in four caverns
 - Enough gas to fuel 500,000 homes annually
- High-deliverability natural gas storage can:
 - Support the growing demand of heating loads and gas fired generation
 - "Firm" intermittent renewable energy
 - Enhance reliability of existing energy infrastructure
 - Provide immediate an fuel source to meet daily operational swings of electric generation facilities
 - Reduce emissions and cumulative environmental impacts



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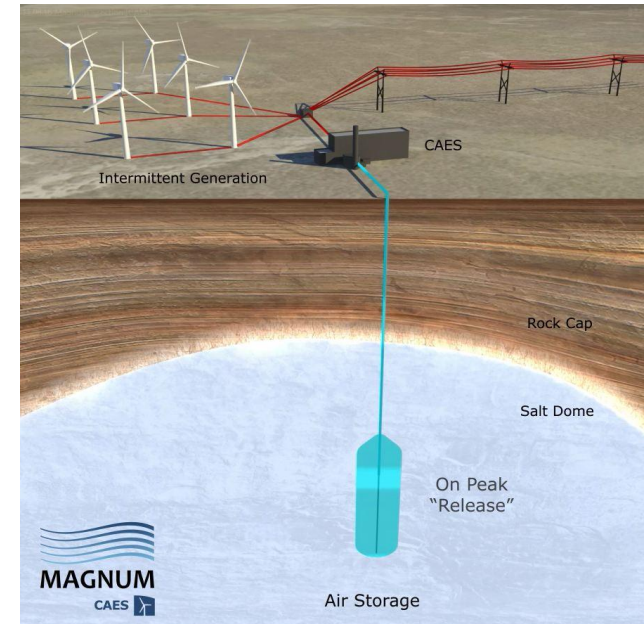
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Magnum CAES

Compressed Air Energy Storage

- Two operational facilities
 - McIntosh, Alabama (in-service 1991)
 - Huntorf, Germany (in-service 1978)
- Comparison of Magnum CAES and McIntosh CAES
 - McIntosh CAES:
 - Compact 710 mW energy storage and peaking facility
 - Created directly above solution mined caverns on a salt dome
 - Salt dome also contains high deliverability gas storage
 - Facility is owned by municipal utility
 - Magnum CAES
 - scalable from 137 mW and can be built out as demand increases
 - similarly situated in proximity to existing utility infrastructure and gas storage
- The difference between Magnum CAES and McIntosh CAES is the primary application
 - McIntosh CAES designed and operated to move off-peak energy to on-peak
 - Magnum CAES will be used to integrate renewables, improve transmission efficiency, and reduce coal plant cycling



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Magnum NGLs

NGLs Market is Booming

- Field produced NGLs will grow by 50% due to the expansion of wet shale gas production
- Growth is spread among all major producing basins including those in the Rockies
- Refiner produced NGLs will grow by 6% in the next 2 years
- Regulatory uncertainty will dramatically impact NGLs utilization

NGLs Infrastructure is Strained

- The liquids boom has filled NGL pipelines and storage facilities
- Existing Western storage capacity is fully utilized
- Logistics are more challenging than ever

Magnum NGLs is the Perfect Solution

- Only new storage project in the West
- At a crossroads of existing transportation infrastructure
- Future expansion potential to meet demand as market grows
- Currently permitted and construction ready



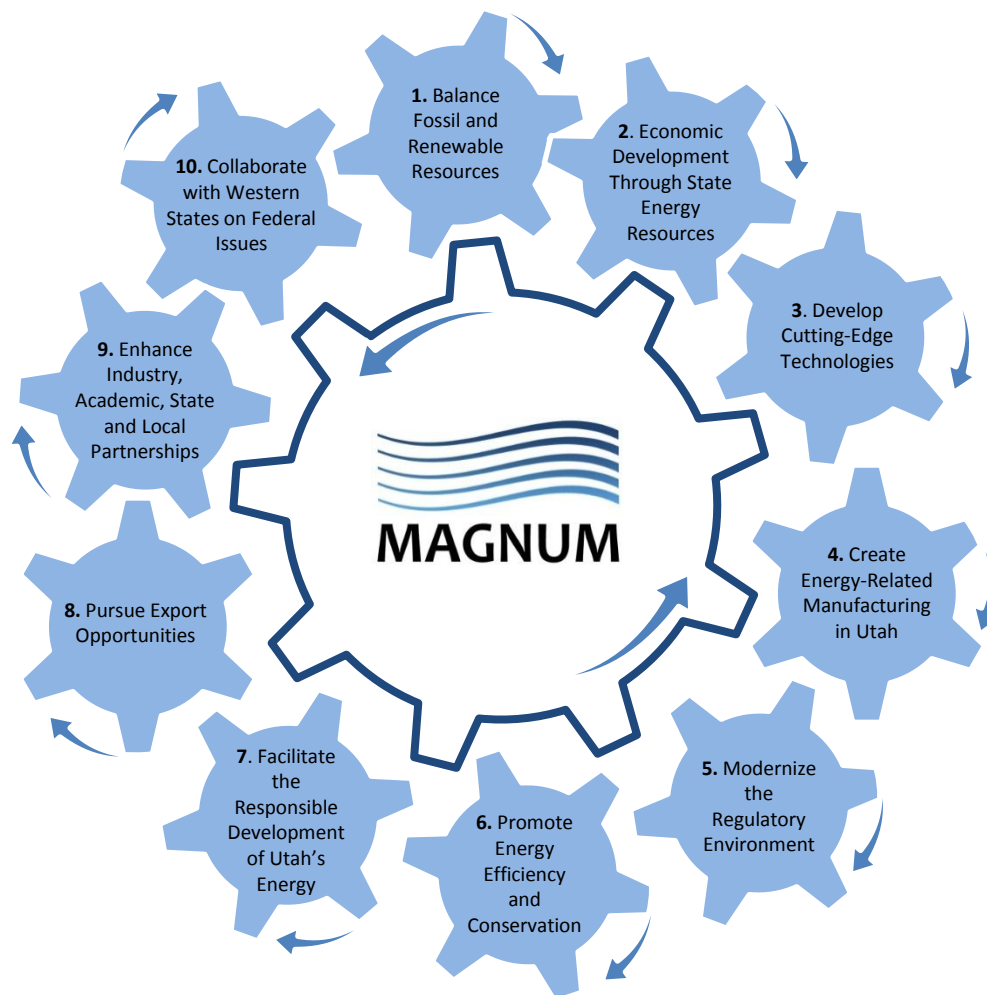
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A Strategic Asset for the State

The Western Energy Hub Can Drive All 10 Goals of Utah's 10-Year Strategic Energy Plan



Magnum is the anchor tenant at SITLA's Millard County industrial block

Revenue will go to the Utah's Schoolchildren

Magnum's initial investment will attract follow-on industrial and business development

Multiple business platforms with a Potential for \$3.5 billion in future development

Hundreds of future jobs from construction to operation

Thank You

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